

JOB DESCRIPTION

SPECIFIC JOB	Postdoctoral Researcher -
GENERIC ROLE	POSTDOCTORAL RESEARCH SCIENTIST
LEVEL/GRADE	D
JOB FAMILY	SCIENCE
CONTRACT	Full time
HOURS	37 hours per week
REPORTS TO	Christophe Lambing
DEPARTMENT	Sustainable Soils and Crops
LOCATION	Harpenden
DATE	15/06/2025

OVERVIEW OF ROLE/JOB PURPOSE

Applications with an interest in plant biology, molecular biology and genomics are invited to apply for a two-year post-doctoral research position to work in the laboratory of Dr. Christophe Lambing at Rothamsted Research.

Our main research aims to understand the process of meiotic recombination and how it is regulated during reproductive development. During meiosis, the genome undergoes 100s of programmed-DNA double strand breaks which are processed by inter-homologue recombination. This repair pathway is unique to germ cells and facilitates the exchange of genetic information between chromosomes. Meiotic recombination is a driving force for genome evolution, but its molecular mechanism remains incompletely understood. The aim of this project is to decipher the molecular pathway leading to germ cell differentiation in the plant model *Arabidopsis* and understand how it influences meiotic recombination. A mutant line is readily available for gene functional characterisation and a multi-omics approach will be used to identify novel candidate genes and answer this long-standing question in the field. This project has high potential for scientific discovery.

The appointee will lead the project and contribute to the development of novel molecular techniques. The post will especially suit applicants who have experience in both wet lab techniques and bioinformatics.

Previous experience in at least some techniques in RNA-sequencing, ChIP-sequencing, flow cytometry and microscopy is highly recommended. The role holder will perform next generation sequencing experiments, molecular techniques, super-resolution microscopy, presentation of data at conferences and writing manuscripts for publication.

We are looking for an enthusiastic and talented individual to join a dynamic group. The candidate will hold, or will be close to obtaining, a PhD in Biology and have a strong track record of research excellence. The candidate is expected to work effectively and independently within a team and be eager to learn new skills and develop new techniques to push the limits of science.

MAIN DUTIES OF ROLE			
Generic Outputs	Weighting	Description of Outputs	Description of Job Specific Duties
UNDERTAKING THE RESEARCH	75%	Conducting independent research experiments using existing or new approaches	<ul style="list-style-type: none"> • Excellent understanding of laboratory practices and research excellence • Plan and implement experiments to support the project goals • Willingness to develop new techniques to explore novel research directions in the field. • Coordinate with collaborating partners and other group members to plan experiments • Conduct literature review to support the design and implementation of projects
ANALYSIS, PRESENTATION AND PUBLICATION	10%	Interpreting research findings and contributing to the writing and publication of findings in highly renowned journals and via presentations at conferences	<ul style="list-style-type: none"> • Consolidate, verify and analyse collected data using appropriate statistical tools, methods and packages • Interpret the research findings based on defined objectives of the study and related literature review, and draw conclusions from the research studies • Disseminate research findings through participation in national and international conferences. • Contribute to the writing and preparation of research manuscripts for submission in highly renowned journal.
FUNDING AND FINANCIAL MANAGEMENT	5%	Contributing to research proposals and writing of bids, winning fellowship funding etc.	<ul style="list-style-type: none"> • Contribute to proposals to BBSRC and other bodies, either by providing information or as a researcher co-investigator • Ensure efficient use of available resources
WORKING WITH OTHERS AND MANAGEMENT	5%	Supporting peers and overseeing work of more junior staff	<ul style="list-style-type: none"> • Be involved in guidance and development of Scientific Technicians, PhD and summer student, and visiting workers • Adhere to health and safety procedures affecting self and others at all times • Coordinate the progress with project partners
CONTINUING PROFESSIONAL DEVELOPMENT	5%	Proactive planning of own development opportunities which serve to broaden existing knowledge base and skillset	<ul style="list-style-type: none"> • Formulate a clear idea on how career may develop and start to undertake appropriate development activities to acquire new skills • Seek advice, guidance, coaching or mentoring from appropriate individuals • Seek appropriate training to enhance competency and employability
Competencies		All stage 2	<ul style="list-style-type: none"> • See Appendix

PERSON SPECIFICATION AND SHORTLISTING CRITERIA*				
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REPORTS TO	Christophe Lambing			
DEPARTMENT	Sustainable Soils and Crops			
LOCATION	Harpenden			
EDUCATION/QUALIFICATIONS		Essential	Desirable	How Tested? **
1.	A PhD degree in biology	X		
2.	Evidence of research excellence through publication in high impact journals	X		
EXPERIENCE/KNOWLEDGE/SKILLS		Essential	Desirable	How Tested? **
1.	Up-to-date knowledge in the field of meiosis is desirable but not essential as long as the applicant is eager to be actively involved in the project direction and data analysis	X		
2.	Ability to apply relevant models, techniques, methods and/or develop new ones	X		
3.	Working experience in at least some of these techniques: genomics, flow cytometry, molecular biology, cytogenetics	X		
4.	Ability to clearly communicate, verbally and in writing, research data. Present data at conferences and contribute to the writing of scientific manuscripts.	X		
5.	Experience of planning and progressing work activities with independence and within general, professional guidelines using initiative, and independent judgement	X		
6.	Awareness of current and future priorities of the research group	X		
7.	Willingness to support the learning of other group members and work as a team to achieve research excellence	X		
8.	Full understanding in laboratory practices	X		
9.	Basic knowledge in statistics and genomics is desirable but not essential as training can be provided		X	
BEHAVIOURS/COMPETENCIES				How Tested? **

* Minimum requirements of the post and how they will be assessed

** Evidence of criteria will be established from: **AF** (application form), **IV** (interview), **Test** (skills test/prepared question/presentation), **Cert** (certificated checked by interview panel)

1.	Drive for Quality: Makes incremental improvements to processes	CV/interview
2.	Strategic Thinking: Draws on experience when undertaking duties of role	CV/interview
3.	Creativity and Innovation: Responds positively to change; identifies and tries out different approaches	CV/interview
4.	Developing Self and Others: Formalises development needs for self and participates in learning activities to enhance performance	CV/interview
5.	Professional Conduct: Demonstrates an understanding of others' perspectives	CV/interview
6.	Productive Relationships: Is a good team player	CV/interview
7.	Effective Communication: Communicates to a wide audience, in an accurate and timely manner	CV/interview